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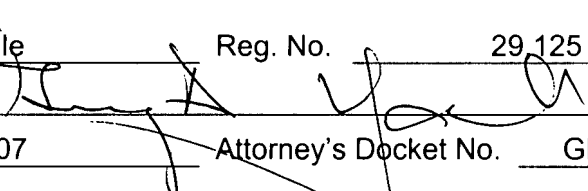
| | | |
|--|------------------------|--|
| TRANSMITTAL FORM  | Application Number | 10/555,920 |
| | Filing Date | November 7, 2005 |
| | First Named Inventor | Axel Boywitz et al |
| | Title | Method for Bonding a Layer of Thermoplastic Polymer to the Surface of an Elastomer |
| | Group Art Unit | |
| | Examiner Name | |
| | Attorney Docket Number | GMH/436/PC/US |
| | Date | May 9, 2007 |

ENCLOSURES

| | |
|--|--|
| <input type="checkbox"/> Response to Office Action | <input type="checkbox"/> Preliminary Amendment |
| <input type="checkbox"/> Information Disclosure Statement | <input checked="" type="checkbox"/> Postcard reflecting enclosures |
| <input checked="" type="checkbox"/> Other: English translation of International Preliminary Report on Patentability | |
| <input checked="" type="checkbox"/> It is hereby petitioned that any required extension of time be granted for filing the amendment. An extension of _____ month(s) having a fee of \$ _____ appears required. | |
| <input type="checkbox"/> A check in the amount of \$ _____ is attached. Please credit any overpayment to Deposit Account 16-2563 of Alix, Yale & Ristas, LLP. | |

The Commissioner is hereby requested and authorized to charge Deposit Account 16-2563 of Alix, Yale & Ristas, LLP for any fee, not enclosed herewith, due for any reason in connection with the amendment or this or any other document accompanying the amendment, including (a) any filing fees under 37 CFR 1.16 for the presentation of extra claims and (b) any patent application processing fees under 37 CFR 1.17. A duplicate copy of this sheet is attached.

SIGNATURE OF APPLICANT, ATTORNEY OR AGENT

| | | | |
|-------------------------|--|-----------------------|----------------------|
| Firm or Individual name | <u>Guy D. Yale</u> | Reg. No. | <u>29,125</u> |
| Signature |  | | |
| Date | <u>May 9, 2007</u> | Attorney's Docket No. | <u>GMH/436/PC/US</u> |

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited on the date below with the United States Postal Service as first class mail in an envelope addressed to "Commissioner for Patents, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, Virginia 22313-1450."

| | | | |
|-----------------------|---|----------|--------------------|
| Typed or Printed Name | <u>Guy D. Yale</u> | Reg. No. | <u>29,125</u> |
| Signature |  | Date: | <u>May 9, 2007</u> |

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

| | | |
|--|--|---|
| Applicant's or agent's file reference HELT105PWO/so | FOR FURTHER ACTION | See item 4 below |
| International application No. PCT/EP2004/009799 | International filing date (<i>day/month/year</i>). 02 September 2004 (02.09.2004) | Priority date (<i>day/month/year</i>) |
| International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237 | | |
| Applicant HELLERMANN TYTON GMBH | | |

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

Date of issuance of this report
06 March 2007 (06.03.2007)

Authorized officer

Yolaine Cussac

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1211 Geneva 20, Switzerland

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PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year) **See form PCT/ISA/210**

| | | | |
|---|---|--|--|
| Applicant's or agent's file reference HELT105PWO/so | | FOR FURTHER ACTION See paragraph 2 below | |
| International application No. PCT/EP2004/009799 | International filing date (day/month/year) 02.09.2004 | Priority date (day/month/year) | |
| International Patent Classification (IPC) or both national classification and IPC B29C65/14 | | | |
| Applicant HELLERMANN TYTON GMBH | | | |

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

| | |
|--|--------------------|
| Name and mailing address of the ISA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/009799

Box No. 1 Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing

☐ table(s) related to the sequence listing

b. format of material

☐ in written format

☐ in computer readable form

c. time of filing/furnishing

☐ contained in the international application as filed.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/EP2004/009799

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability:
citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|------------|-----|
| Novelty (N) | Claims | <u>1-4</u> | YES |
| | Claims | _____ | NO |
| Inventive step (IS) | Claims | <u>1-4</u> | YES |
| | Claims | _____ | NO |
| Industrial applicability (IA) | Claims | <u>1-4</u> | YES |
| | Claims | _____ | NO |

2. Citations and explanations:

1. Reference is made to the following document:

D1 HAENSCH D ET AL: "HARTE UND WEICHE
KUNSTSTOFFE MIT DIODENLASER VERBINDEN.
JOINING HARD AND SOFT PLASTICS WITH A DIODE
LASER," KUNSTSTOFFE, CARL HANSER VERLAG.
MUNICH, DE, Vol. 88, No. 2, February 1998
(1998-02), pages 210-212, XP000732887, ISSN:
0023-5563

2. Document D1 is considered to be the closest prior art. It discloses (see paragraph 3, table 1):

A method for connecting a layer of a thermoplastic polymer to the surface of an elastomer, wherein the thermoplastic layer is pressed against the surface of the elastomer while it is being heated by radiating heat that can permeate the thermoplastic layer and be absorbed by the surface of the elastomer and that radiates through the thermoplastic layer.

The subject matter of independent claim 1 differs from the prior art portrayed in D1 in that a

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/009799

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

foamed elastomer is used.

The subject matter of claim 1 is therefore novel.

The problem addressed by the present invention can therefore be considered that of preventing heat transferred to the surface of the elastomer from quickly flowing to the rear. The surface of the elastomer can therefore be heated enough to sufficiently liquefy by conducted heat the surface of the thermoplastic layer pressed against said elastomer to create a sufficient bond with the surface of the elastomer.

None of the citations presents or suggests the above-cited features.